

# EXHIBIT 1

## (Part 1 of 2)

**PRELIMINARY EXPERT REPORT OF WILLIAM S. COOPER**

**I. INTRODUCTION**

1. I have been retained by Latham & Watkins LLP and the New York Civil Liberties Union Foundation, counsel for Plaintiffs in the above-captioned matter, to provide an analysis of the demographics and population of the East Ramapo Central School District (“East Ramapo” or the “District”), and to determine whether the minority population in the District is sufficiently numerous and geographically compact to allow for the creation of single-member district plan configurations that will satisfy the requirements of *Thornburg v. Gingles*, 478 U.S. 30 (1986).

2. Plaintiffs have challenged the use of the existing at-large method of electing members of the District’s Board of Education (the “Board”) on the grounds that it dilutes the voting strength of Black and Latino voters, in violation of Section 2 of the Voting Rights Act.<sup>1</sup> My analysis addresses (i) the demographic profile of the District, including population changes, the geographic distribution of the minority population, and communities of interest; and (ii) illustrative plans for redistricting that would comply with the threshold precondition set forth in *Gingles* that the minority group at issue be sufficiently large and geographically compact to constitute a majority in a single-member district (“*Gingles* 1”).

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<sup>1</sup> The terms “Latino” and “Black” are each used in this report as they are defined by the U.S. Census Bureau. See U.S. Census Bureau, Glossary, Hispanic or Latino Origin, [https://www.census.gov/glossary/#term\\_HispanicorLatinoorigin](https://www.census.gov/glossary/#term_HispanicorLatinoorigin); U.S. Census Bureau, Glossary, Black or African American [https://www.census.gov/glossary/#term\\_BlackorAfricanAmerican](https://www.census.gov/glossary/#term_BlackorAfricanAmerican).

## II. SUMMARY OF PRELIMINARY OPINIONS

3. Based on my expertise and review of historical and current demographics (reported in the decennial Census), as well as socioeconomic characteristics (reported in the annual releases of the American Community Survey (“ACS”)<sup>2</sup> for Blacks, Latinos, and non-Hispanic Whites (“NH Whites”) in East Ramapo, I conclude that the minority population is sufficiently numerous and geographically compact to allow for three single-race non-Hispanic Black citizen voting age population (“BCVAP”)-majority Board of Education single-member districts, or, in the alternative, four single-race non-Hispanic Black and Latino citizen voting age population (“B+LCVAP”) districts<sup>3</sup> under a variety of 9-single-member election plan configurations.

4. More specifically, as discussed in Sections IV and V below, I analyze the information detailed in **Exhibit A** to this report, and reach the following conclusions:

- According to U.S. Census Bureau decennial Census complete count and the 5-year 2011-2015 ACS sample estimates, the minority population in the District has increased over the past two decades, and represents 34.3% of citizens (all ages) and 39.5% of the citizen voting age population (“CVAP”) in the District. Specifically, Blacks comprise 19.1% of the citizen population and 24.1% of the CVAP in the District; Latinos represent 10.7% of the citizen population and 9.4 % of the CVAP; and Asians represent 3.3% of the citizen population and 4.5% of the

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<sup>2</sup> ACS refers to the 5-year 2011-2015 ACS, published by the U.S. Census Bureau.

<sup>3</sup> My understanding is that the creation of one or more majority B+LCVAP districts is one way to meet the first *Gingles* precondition in this Section 2 case. My primary focus on a Black/Latino threshold CVAP-majority does not imply that Asian Americans and other minorities in the District are not part of a community of interest and voting coalition that includes Blacks and Latinos.

CVAP. NH Whites are a majority of the citizen population (65.7%) and a majority of the CVAP (60.5%).

- Blacks and Latinos in the District are a community of interest. Both minority populations share contemporary concerns relating to public school education, language barriers, immigration, and citizenship status. Latinos in the District lag behind NH Whites and Blacks across key indicators of socioeconomic well-being. Blacks in the District generally outpace NH Whites across most key indicators of socioeconomic well-being.
- As shown in *Illustrative Plan 1*, Blacks in the District are sufficiently numerous and geographically compact to comprise a majority of the CVAP in three of nine single-member districts. *Illustrative Plan 1* meets the *Gingles* 1 precondition for numerosity and compactness, and complies with traditional redistricting principles, including one-person one-vote, compactness, contiguity, respect for communities of interest, and the non-dilution of minority voting strength.
- As shown in *Illustrative Plan 2*, Blacks and Latinos in the District are sufficiently numerous and geographically compact to comprise a majority of the CVAP in four of nine single-member districts. *Illustrative Plan 2* meets the *Gingles* 1 precondition for numerosity and compactness, and complies with traditional redistricting principles, including one-person one-vote, compactness, contiguity, respect for communities of interest, and the non-dilution of minority voting strength.

### III. BACKGROUND AND EXPERIENCE

5. A complete summary of my redistricting work and Voting Rights Act experience is attached hereto as **Exhibit B**.

6. I have testified at trial as an expert witness on redistricting and demographics in federal courts in about 38 voting rights cases since the late 1980s. Four of these cases resulted in changes to statewide legislative boundaries: *Rural West Tennessee African-American Affairs Council, Inc. v. McWherter*, No. 92-cv-2407 (W.D. Tenn. 1995); *Old Person v. Brown*, No. 96-cv-0004 (D. Mont. 2002); *Bone Shirt v. Hazeltine*, No. 01-cv-3032 (D.S.D. 2004); and *Alabama Legislative Black Caucus v. Alabama*, No. 12-cv-691 (M.D. Ala. 2017). Over 25 of the cases led to changes in local election district plans.

7. Since the release of the 2010 Census, I have developed several statewide legislative plans (Alabama, Georgia, Kentucky, Florida, South Carolina, and Virginia) and approximately 150 local redistricting plans, primarily for groups working to protect minority voting rights.

8. During the 2010 redistricting cycle, four plans that I developed for local government clients were adopted – in Bolivar County, Mississippi; Claiborne County, Mississippi; the City of Grenada, Mississippi; and Sussex County, Virginia. In addition, in 2011, I served as a redistricting consultant to the Miami-Dade County Commission and Board of Education.

9. Since 2012, I have provided analysis, testimony, and election plans in six Section 2 cases in which federal courts determined that minority plaintiffs met the first prerequisite of *Gingles*: *Montes v. City of Yakima*, No. 12-cv-3108 (E.D. Wash. 2014); *Pope v. Cty. of Albany*, No. 11-cv-0736 (N.D.N.Y. 2015) and *Pope v. Cty. of Albany*, No. 11-cv-0736 (N.D.N.Y. Jan. 28, 2014); *Mo. State Conference of the NAACP v. Ferguson-Florissant Sch. Dist.*, No. 14-cv-2077

(E.D. Mo. 2016); *Glatt v. City of Pasco*, No. 16-cv-5108 (E.D. Wash. Jan. 27, 2017); and *Terrebonne Parish Branch NAACP v. Jindal*, No. 14-cv-0069 (M.D. La. Aug. 17, 2017).

10. In addition, based in part on my testimony, a Utah federal court ruled that election plans for the San Juan County School Board and the San Juan County Commission are unconstitutional. *Navajo Nation v. San Juan Cty.*, No. 12-cv-39 (D. Utah 2016) and *Navajo Nation v. San Juan Cty.*, No. 2:12-cv-39 (D. Utah July 14, 2017). The court has not yet ruled on the Section 2 claims.

11. In *Montes v. City of Yakima*, No. 12-cv-3108 (E.D. Wash. Feb. 17, 2015), as a remedy for a Section 2 violation, the court adopted a seven single-member district plan that I developed for the plaintiffs.

12. In 2016, I developed two redistricting plans that were adopted as part of consent decrees in Section 2 lawsuits in Georgia— *Ga. State Conference of the NAACP v. Fayette Cty. Bd. of Comm'rs*, No. 11-cv-123 (N.D. Ga. 2013) and *Ga. State Conference of the NAACP v. Emanuel Cty. Bd. of Comm'rs*, No. 16-cv-21 (S.D. Ga. 2016).

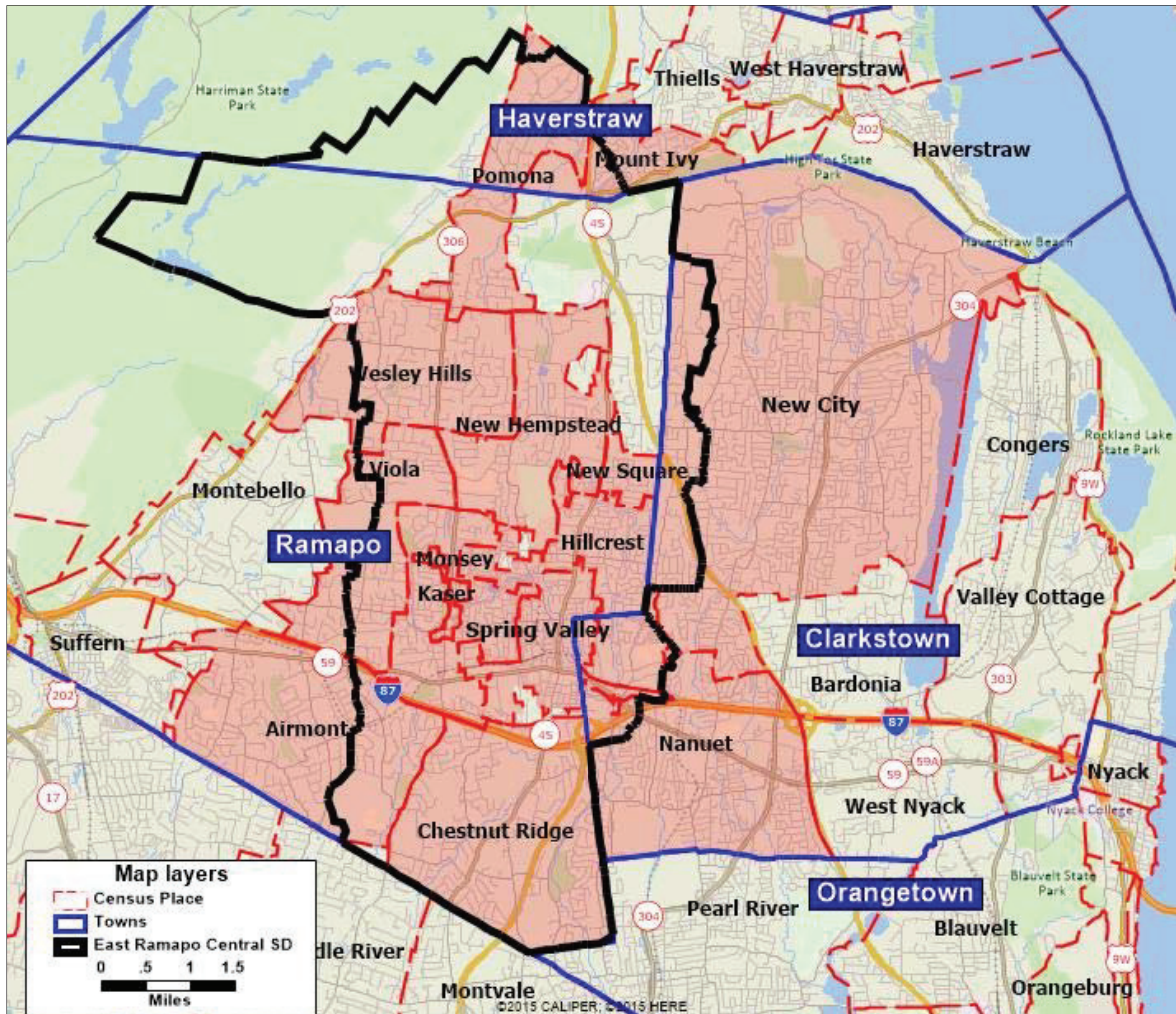
#### **IV. DEMOGRAPHIC PROFILE OF EAST RAMAPO**

##### **A. Location of the District**

13. East Ramapo encompasses a densely populated area west of the Hudson River in Rockland County, New York. The District is located approximately 35 miles northwest of New York City and covers an area of 35.3 square miles. According to the 2010 Census, the District has a total population of 113,031. More recent population estimates for school districts are not available from the U.S. Census Bureau (“Census Bureau”).

14. As reflected in the regional map shown in **Figure 1** (on the next page), the District, which is outlined in black, encompasses most of the Town of Ramapo – one of five towns that subdivide Rockland County.



**Figure 1: East Ramapo Central School District, New York and Vicinity**

15. Town boundaries on the map in **Figure 1** are depicted with blue lines, with their names noted in white text on blue background. The 14 populated places – incorporated villages as well as unincorporated Census Designated Places (“CDPs”)<sup>4</sup> – that are within or partially contained in the District are shaded pink, with their names noted in black text.

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A Census Designated Place is a concentration of population identified by the U.S. Census Bureau for statistical purposes, with a boundary defined by the Census Bureau. *See* [https://www.census.gov/geo/reference/gtc/gtc\\_place.html](https://www.census.gov/geo/reference/gtc/gtc_place.html).



**B. 2010 Census – East Ramapo Central School District Population by Race, Age and Ethnicity**

16. **Figure 2** shows the 2010 population by race, age, and ethnicity for the District.

**Figure 2: East Ramapo Central School District – 2010 Census Population by Age, Race and Ethnicity**

	2010 (all ages)		2010 (voting age)	
	Number	Percent	Number	Percent
<b>Total Population</b>	113,031	100.00%	71,913	100.00%
NH White	66,179	58.55%	37,611	52.30%
Total Minority Pop.	46,852	41.45%	34,302	47.70%
Latino	17,447	15.44%	12,421	17.27%
NH Black	22,744	20.12%	16,841	23.42%
NH Asian	4,835	4.28%	3,919	5.45%
NH Hawaiian/Pacific Islander	15	0.01%	14	0.02%
NH American Indian	138	0.12%	88	0.12%
NH Other	252	0.22%	159	0.22%
NH Two or More Races	1,421	1.26%	860	1.20%
Single-race Black (Including Hispanics)	23,738	21.00%	17,516	24.36%
Any Part Black (Including Hispanics)	24,948	22.07%	18,213	25.33%
NH Any Part Black	23,587	20.87%	17,343	24.12%
Single-race Asian (Including Hispanics)	4,905	4.34%	3,965	5.51%
Any Part Asian (Including Hispanics)	5,559	4.92%	4,364	6.07%
NH Any Part Asian	5,398	4.78%	4,269	5.94%

17. According to the 2010 Census, NH Whites represent 58.55% of the total population in the District and constitute the largest racial/ethnic category. Blacks<sup>5</sup> represent the largest minority population (22.07% Any Part (“AP”),<sup>6</sup> 20.87% NH AP, and 20.12% NH single-race),

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<sup>5</sup> In this report, “Black” or “African American”; “Asian” or “Asian American”; and “Latino” or “Hispanic” are synonymous. “NH White” means non-Hispanic single-race White. “NH Black” means non-Hispanic single-race Black, NH Asian means non-Hispanic single-race Asian.

<sup>6</sup> The Any Part Black classification includes all persons who self-identified in the 2010 Census as single-race Black or some part Black, including Hispanic Black. It is my understanding that following the U.S. Supreme Court decision in *Georgia v. Ashcroft*, 539 U.S. 461 (2003), the “any part” definition is an appropriate Census classification to use in most Section 2 cases. Because this Section 2 litigation focuses on a Black/Latino

followed by Latinos (15.44%), who may be of any race, and Asians (4.92% AP, 4.78% NH AP and 4.28% NH single-race). As shown in the two rightmost columns of **Figure 2**, minorities comprise a larger share of the voting age population (“VAP”) than the overall population – 47.70% versus 41.45% for all ages. According to the 2010 Census, NH Whites are 52.3% of the VAP, followed by NH Blacks (23.42%), Latinos (17.27%), and NH Asians (5.45%).

### C. Population Change in the District -- 1990 to 2010

18. As shown in the rightmost column of **Figure 3**, the population in the District grew by 44.2% between 1990 and 2010 – from 78,378 persons in 1990 to 113,031 persons in 2010.<sup>7</sup>

**Figure 3: East Ramapo Central School District – 1990 Census to 2010 Census  
Population by Race and Ethnicity**

	1990 Number	Percent	2000 Number	Percent	2010 Number	Percent	1990 to 2010 Change Number	1990 to 2010 Change Percent
<b>Total Population</b>	78,378	100.00%	95,335	100.00%	113,031	100.00%	34,653	44.2%
NH White	56,921	72.62%	58,117	60.96%	66,179	58.55%	9,258	16.3%
Total Minority Pop.	21,457	27.38%	37,218	39.04%	46,852	41.45%	25,395	118.4%
Latino	3,508	4.48%	8,466	8.88%	17,447	15.44%	13,939	397.3%
NH Black	14,406	18.38%	20,773	21.79%	22,744	20.12%	8,338	57.9%
NH Asian <sup>8</sup>	3,287	4.19%	5,217	5.47%	4,835	4.28%	1,548	47.1%

voting coalition in the District, the NH AP definition is the preferable metric. However, for simplicity and consistency with citizenship estimates reported in the ACS, which do not provide sub-county “any part” citizenship estimates, I generally refer to single-race NH population categories in this report.

<sup>7</sup> U.S. Census Bureau: PL94-171 files for 2000 to 2010 decennial censuses, available at: <https://nces.ed.gov/programs/edge/tables.aspx?ds=census&y=2000> and <https://nces.ed.gov/programs/edge/tables.aspx?ds=census&y=2010>, and a Special Tabulation from the 1990 Census for the National Center for Education Statistics, available at: <https://nces.ed.gov/Programs/EDGE/tables.aspx?ds=census&y=1990>.

<sup>8</sup> In 1990, NH Asian includes Hawaiian and Pacific Islanders.

19. Most of the population growth in the District since 1990 can be attributed to an increase in the minority population. Between 1990 and 2010, the overall minority population in the District grew by 118%, from 21,457 to 46,852. In comparison, the NH White population grew by just 16.3%, from 56,921 in 1990 to 66,179 in 2010.

20. In 1990, minorities represented 27.38% of the population in the District. By 2010, minorities comprised 41.45% of the population in the District. Although most of the growth in the overall minority population in the District occurred between 1990 and 2000, the Latino population almost doubled between 2000 and 2010 – from 8,466 to 17,447 persons, reflecting a 106.1% change.

#### **D. Citizen Population by Age, Race, and Ethnicity**

21. As shown in **Figure 4** (on the next page), according to the ACS,<sup>9</sup> the minority population represents 34.3% of citizens (all ages) and 39.5% of the CVAP in the District. More specifically, single-race NH Blacks comprise 19.1% of the citizen population and 24.1% of the CVAP in the District. Latinos represent 10.7% of the citizen population and 9.4% of CVAP.

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<sup>9</sup> July 1, 2013 is the midpoint of the 2011-2015 ACS. Thus, estimates reported in the 5-year ACS are, on average, about four years behind current 2017 citizenship rates. A survey midpoint of July 1, 2017 will be reported in the 2015-2019 ACS, which will be released in December 2020 – just a few months prior to the 2021 release of the 2020 Census.

Starting in the mid-2000s, the ACS replaced the 2000 Census long form survey, which reported socioeconomic and citizenship sample statistics. Numerous courts have relied on the ACS to determine citizenship by race and ethnicity for jurisdictions and election districts, including three recent Section 2 cases where I have served as an expert for the plaintiffs: *Terrebonne Parish Branch NAACP v. Jindal*, No. 14-cv-0069 (M.D. La. Aug. 17, 2017), *Montes v. City of Yakima* No. 12-cv-3108 (E.D. Wash. Feb. 17, 2015), and *Glatt v. City of Pasco*, No. 16-cv-5108 (E.D. Wash. Jan. 27, 2017). See also *Perez v. Abbott*, 253 F. Supp. 3d 864, 917 n.69 (W.D. Tex. 2017), where the court relies on ACS citizenship statistics for the combined Black and Latino population. (I am not involved in the *Perez v. Abbott* litigation.)

NH Asians represent 3.3% of the citizen population and 4.5% of the CVAP. NH Whites are a majority of the citizen population (65.7%) and a majority of the CVAP (60.5%).

**Figure 4: East Ramapo Central School District –  
Citizen Population by Age, Race, and Ethnicity**

	2011-15 ACS
% Latino Citizen (all ages)	10.7%
% NH Black Citizen (all ages)	19.1%
% NH Asian Citizen (all ages)	3.3%
% NH White Citizen (all ages)	65.7%
% Minority Citizens	34.3%
% Latino CVAP	9.4%
% NH Black CVAP	24.1%
% NH Asian CVAP	4.5%
% NH White CVAP	60.5%
% Minority CVAP	39.5%
% Latino Citizen U18	12.5%
% NH Black Citizen U18	12.1%
% NH Asian Citizen U18	1.6%
% NH White Citizen U18	73.2%
% Minority U18	26.8%

#### **E. National Origin and Ancestry**

22. The ACS does not provide national origin tables for the foreign-born Black population. However, the ACS reports that there are 30,452 foreign born persons in the District, of whom 2.2% are from Africa and 34.6% are from the Caribbean region. Of the 10,532 persons with a Caribbean origin, 7,288 are Haitian and 2,388 are Jamaican. (See **Exhibit C-1**).

23. According to the ACS, the Latino population (including both U.S.-born and foreign-born) in the District is predominantly Guatemalan (27.8%), Ecuadorian (19.4%), and Salvadoran (11.4%). Puerto Ricans comprise 14.1% of the Latino population. (See **Exhibit C-2**).

**F. 2010 Census – Population by Town and Place**

24. **Figure 5** shows the 2010 population for the portions of the three Rockland County towns that are partially within the District – Clarkstown, Haverstraw, and Ramapo. Over three-fourths (77.4%) of the 2010 population in the Town of Ramapo resides within the District's boundaries. Put differently, 86.69% of the District's population lives in the Town of Ramapo.

**Figure 5: East Ramapo Central School District by Town – 2010 Census**

Town	2010 Pop. in East Ramapo	% of Total Pop. in Town within East Ramapo	% of East Ramapo Pop.	NH Black+Latino Pop. in East Ramapo	% NH Black+Latino Pop. (East Ramapo portion)	% of NH Black+Latino Pop. in Town within East Ramapo
Clarkstown	11,125	13.21%	9.84%	6,836	61.45%	39.22%
Haverstraw	3,925	10.71%	3.47%	1551	39.52%	7.90%
Ramapo	97,981	77.40%	86.69%	31804	32.46%	87.38%
<b>Total</b>	<b>113,031</b>		<b>100.00%</b>	<b>40,191</b>	<b>35.56%</b>	

25. The District encompasses all or parts of 14 places, six of which are unincorporated CDPs. Eight places are incorporated villages – Airmont, Chestnut Ridge, Kaser, New Hempstead, New Square, Pomona, Spring Valley, and Wesley Hills. The table in **Figure 6** (on the next page) presents 2010 population figures for Blacks and Latinos in the 14 places, along with a breakout of the respective population components within the District.

**Figure 6: East Ramapo Central School District by Village/Census  
Designated Place – 2010 Census**

Village/Place	2010 Pop. in East Ramapo	% of Total Pop. within East Ramapo	% of East Ramapo Pop.	NH Black+Latino Pop. (East Ramapo portion)	% NH Black+Latino Pop. (East Ramapo portion)	% of NH Black+Latino Pop. within East Ramapo
<i>Airmont</i>	2,631	30.49%	2.33%	398	15.13%	37.02%
<i>Chestnut Ridge</i>	7,916	100.00%	7.00%	2212	27.94%	100.00%
Hillcrest*	7,558	100.00%	6.69%	5576	73.78%	100.00%
<i>Kaser</i>	4,724	100.00%	4.18%	43	0.91%	100.00%
Monsey*	18,412	100.00%	16.29%	1069	5.81%	100.00%
Mount Ivy*	1,939	28.19%	1.72%	943	48.63%	35.80%
Nanuet*	5,001	27.97%	4.42%	2,917	58.33%	58.93%
New City*	3,557	10.60%	3.15%	1603	45.07%	31.79%
<i>New Hempstead</i>	5,132	100.00%	4.54%	1239	24.14%	100.00%
<i>New Square</i>	6,944	100.00%	6.14%	33	0.48%	100.00%
<i>Pomona</i>	2,949	95.04%	2.61%	768	26.04%	95.88%
<i>Spring Valley</i>	31,347	100.00%	27.73%	20,721	66.10%	100.00%
Viola*	4,943	71.97%	4.37%	154	3.12%	44.13%
<i>Wesley Hills</i>	5,004	88.91%	4.43%	418	8.35%	92.48%
Undefined*	4,974	35.14%	4.40%	2097	42.16%	37.0%
<b>Total</b>	<b>113,031</b>		<b>100.00%</b>	<b>40,191</b>	<b>35.56%</b>	

\* Unincorporated<sup>10</sup>

#### **G. 2016 Estimates – Population by Town and Village**

26. **Figure 7** (on the next page) shows 2016 population estimates for the Town of Ramapo and for the eight incorporated villages partially or wholly within the District. Population estimates by race and age at the sub-county village level are not available from the Census Bureau. Total population estimates for unincorporated places are not available from the Census Bureau.

<sup>10</sup> Generally, unincorporated communities do not elect local officials.

**Figure 7: East Ramapo Central School District Population Change by Town/Village (2010 – 2016)**

Town/Village	2010 Pop.	% of Total Pop. within East Ramapo	July 1, 2016 Pop. Estimate	% Pop. Change 2010 to 2016
<i>Ramapo Town</i>	126,595	77.40%	136,235	7.6%
<i>Airmont</i>	8,628	30.49%	8,856	2.6%
<i>Chestnut Ridge</i>	7,916	100.00%	8,135	2.8%
<i>Kaser</i>	4,724	100.00%	5,354	13.3%
<i>New Hempstead</i>	5,132	100.00%	5,440	6.0%
<i>New Square</i>	6,944	100.00%	8,357	20.3%
<i>Pomona</i>	3,103	95.04%	3,235	4.3%
<i>Spring Valley</i>	31,347	100.00%	32,603	4.0%
<i>Wesley Hills</i>	5,004	88.91%	5,914	18.2%

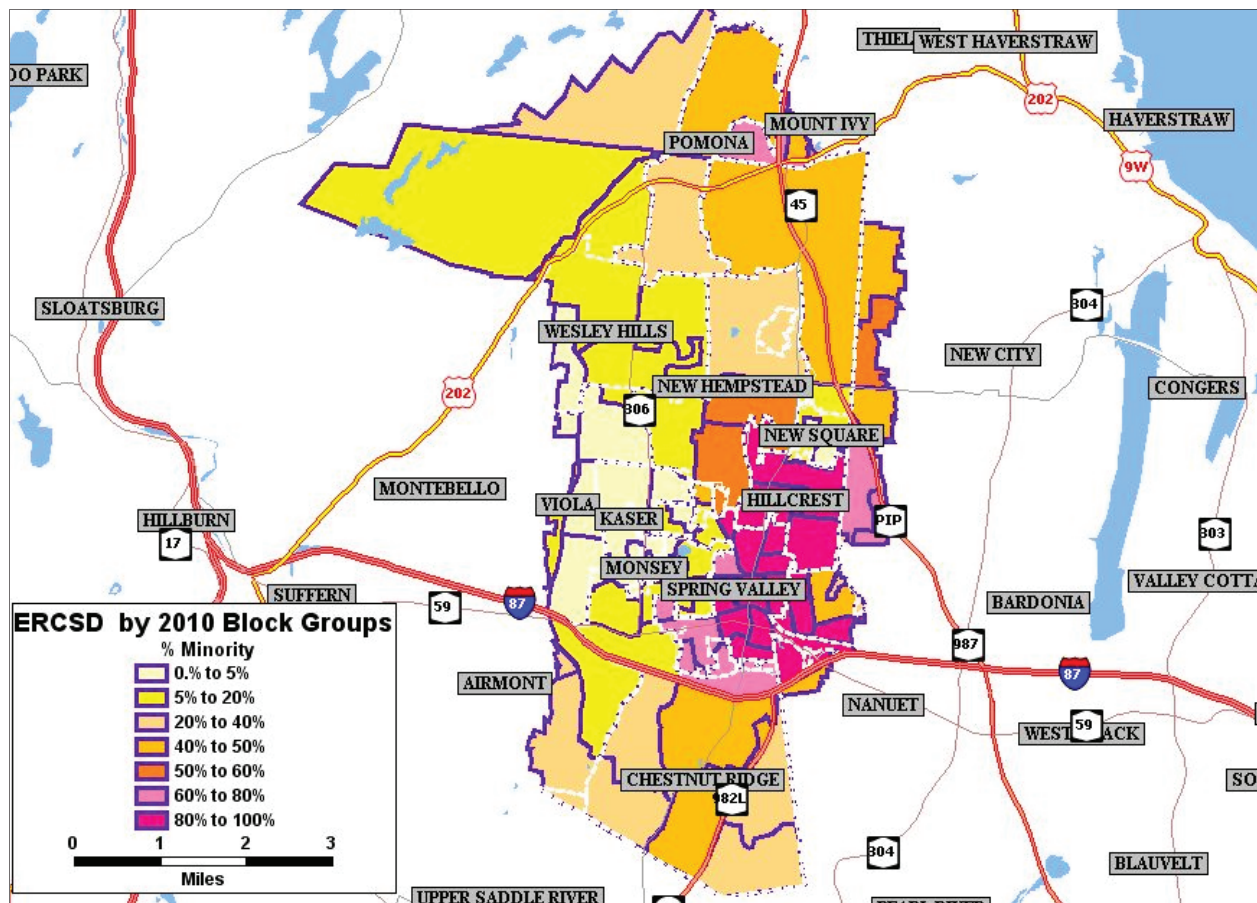
27. The Town of Ramapo, which is mostly in the District, has registered a 7.6% population gain since 2010 – from 126,595 to an estimated 136,235 in 2016. All seven of the incorporated villages that are 90% to 100% within the District have experienced population growth between 2010 and 2016 – ranging from 2.8% in Chestnut Ridge to 20.3% in New Square.

#### **H. Geographic Distribution of Minority Population in the District**

28. The minority population in the District is concentrated in the central part of the District in and around the village of Spring Valley. The map in **Figure 8** (on the next page) shows the geographic distribution of the minority population in the District by 2010 block group.



**Figure 8: East Ramapo Central School District – Percent Minority by 2010 Census Block Group**



29. In the **Figure 8** map, block group boundaries are shown with purple lines. Block groups contain multiple census blocks and often follow neighborhood or jurisdictional lines. White dashed lines on the map depict boundaries for both incorporated and unincorporated places. Dark pink block group areas are 80% or more minority. Yellow and light yellow areas are under 20% minority.

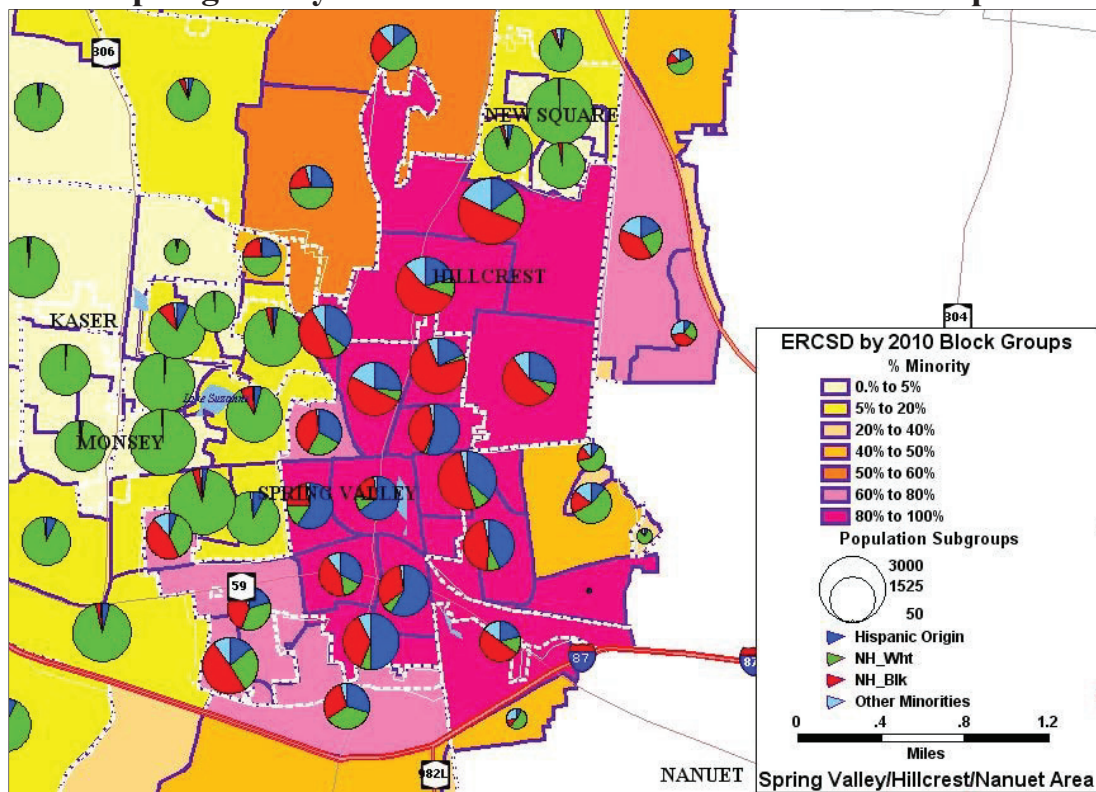
30. Spring Valley, with a total population of 31,247, is the largest incorporated place in the District, and its population is approximately two-thirds NH Black or Latino. Accordingly, Spring Valley represents about half of the District-wide NH Black and Latino population. Unincorporated areas in the District to the east of Spring Valley are also majority-minority,

including the unincorporated CDPs of Hillcrest (which is nearly three-fourths NH Black or Latino in a total population of 7,558) and Nanuet (where the District portion is 58.33% NH Black or Latino).

31. **Exhibit D-1** (North) and **Exhibit D-2** (South) show the **Figure 8** map in detail, with total population (white labels) by block group. Population varies considerably across block groups – from under 10 to about 3,000 persons.

32. As shown in the map in **Figure 9**, Blacks and Latinos live side-by-side in the same neighborhoods in the Spring Valley/Hillcrest/Nanuet area. The pie charts on the map, which are scaled to reflect block group-level 2010 Census total population size, show population composition by race and ethnicity.

**Figure 9: Minority Population –  
Spring Valley/Hillcrest/Nanuet Area 2010 Block Groups**



33. The maps in **Figure 8** and **Figure 9** make clear that there is a high degree of residential segregation in the District, with only a very small percentage of NH Whites living in predominantly minority neighborhoods. Over two-thirds (69.4%) of NH Whites live in block groups that are 80% or more NH White. One-third (33.03%) of NH Whites live in block groups that are 95% or more NH White. By contrast, over half (55.7%) of the minority population in the District lives in highly segregated block groups with minority populations in the range of 83.6% to 98.2%.

#### **I. Rockland County Legislature Districts in East Ramapo**

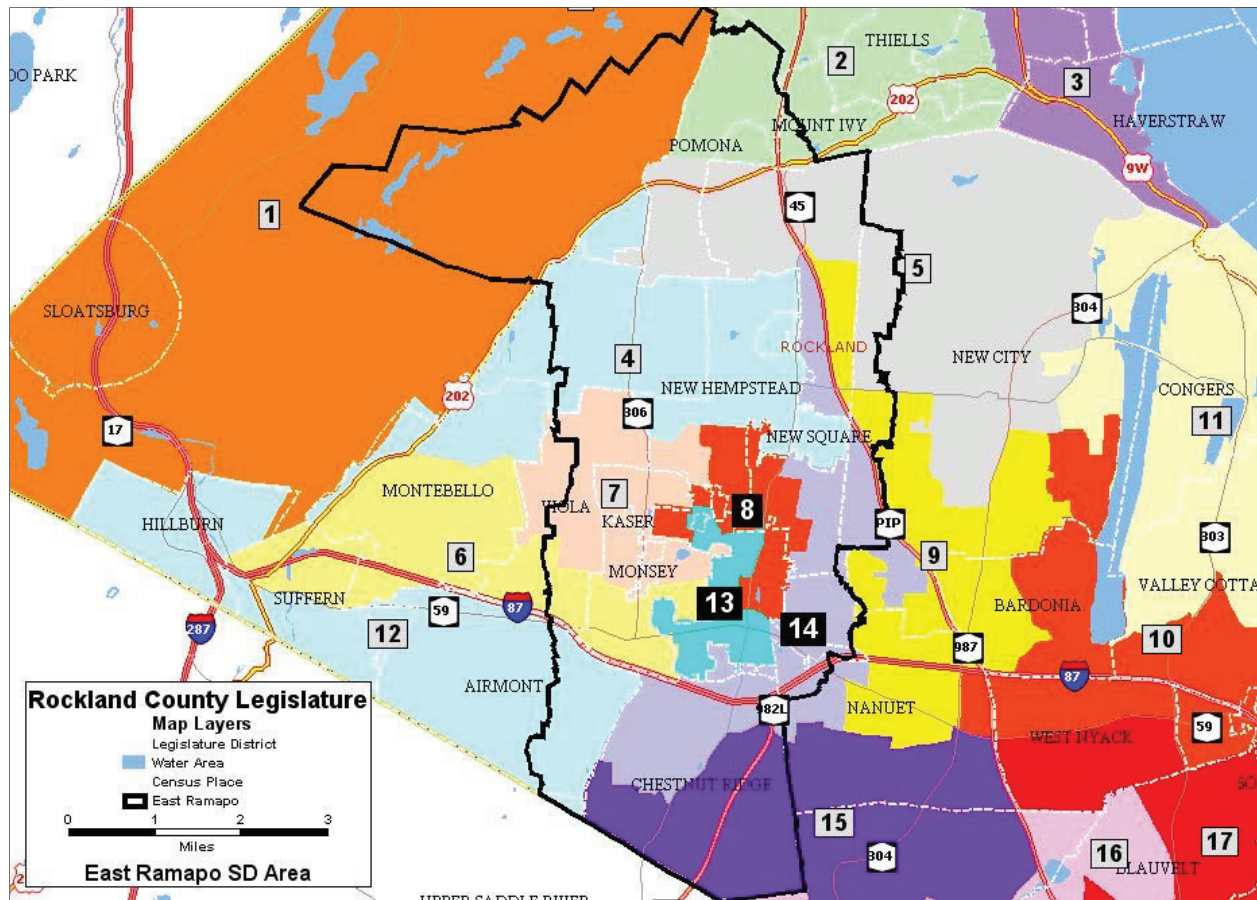
34. Consistent with the geographic concentration and segregation of minorities in the District described in the previous section, there are three majority-minority legislative districts (based on the 2010 Census) in and around Spring Valley, Hillcrest, Nanuet, and Chestnut Ridge.<sup>11</sup>

35. The map in **Figure 10** (on the next page) displays Rockland County Legislature districts (“LDs”) that are within or partly contained in the District. There are just two legislative districts located entirely within the District and both are B+LCVAP majority – LD 8 (66.2% B+LCVAP) and LD 13 (61.5% B+LCVAP). In addition, LD 14, which extends along the east side of the District and is mostly within the District, is plurality B+LCVAP (45.2% B+LCVAP and 42.5% NH White CVAP).<sup>12</sup>

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<sup>11</sup> As explained in **Exhibit A**, I determined 2010 population by race and ethnicity for the Rockland County Legislature districts by overlaying a GIS shapefile of the districts onto a GIS census block boundary file. The GIS shapefile of Rockland County Legislature districts is available for download at: <https://geopower.jws.com/rockland/DataPage.jsp#>.

<sup>12</sup> Approximately 82% of the overall population in LD 14 is in the District. The District population component of LD 14 is 51.3% B+LCVAP.

**Figure 10: Rockland County Legislature Districts**

36. LD 8, LD 13, and LD 14 are adjacent to one another and located in the central and eastern part of the District. The table in **Figure 11** shows 2010 population and CVAP percentages for the three Rockland County Legislature minority districts in the District.

**Figure 11: Rockland County Legislature Districts  
Majority-Minority Districts in East Ramapo**

Legislature District	% NH Black pop.	% Latino pop.	% NH White pop.	% NH Black CVAP	% Latino CVAP	% NH White CVAP	% B + LCVAP
8	40.7%	28.7%	24.2%	50.5%	15.7%	26.5%	66.2%
13	33.8%	30.2%	29.1%	49.6%	12.0%	33.7%	61.5%
14	30.6%	17.2%	38.7%	33.9%	11.4%	42.5%	45.2%



37. These three legislative districts have a combined population of approximately 55,000, which represents the equivalent of nearly five B+LCVAP-majority districts out of nine hypothetical Board of Education single-member districts.

38. Thus, by adopting the current County Legislature Plan, the Rockland County Legislature has effectively established that the Black and Latino population in the District is sufficiently numerous and geographically compact to constitute as many as five single-member majority-minority CVAP districts.<sup>13</sup>

#### **I. School Enrollment – Public and Private**

39. School enrollment in the District is extremely segregated. Approximately 90% of the nearly 8,500 students attending 14 public schools are NH Black or Latino. The table in **Figure 12** (on the next page) presents 2015-16 school enrollment by race and ethnicity for public schools in the District, as reported by the New York State Education Department (“NYSED”).<sup>14</sup> Final 2016-17 public school enrollment data by district is not yet published on the NYSED website.<sup>15</sup>

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<sup>13</sup> See Exhibit A, ¶ 7; ROCKLAND COUNTY ADMIN. CODE § 5-7(B).

<sup>14</sup> <https://data.nysed.gov/enrollment.php?year=2016&instid=800000039112>.

<sup>15</sup> Preliminary 2016-17 enrollment data compiled by the NYSED is available to download at: <http://www.p12.nysed.gov/irs/statistics/enroll-n-staff/home.html>

**Figure 12: East Ramapo Central School District Public School Enrollment by Race and Ethnicity 2015-16**

	<b>2015-2016 Number</b>	<b>Percent</b>
<b>Total Enrollment</b>	<b>8,472</b>	<b>100.00%</b>
Total Minority	8,103	95.64%
NH White	369	4.36%
NH Latino	4,499	53.10%
NH Black	3,135	37.00%
NH Asian	384	4.53%
NH Am. Indian	2	0.02%
NH Other	83	0.98%

40. For the 2016-17 school year, the total private K-12 enrollment for students who live in East Ramapo is 24,579 students (27,675 including pre-K) of whom 97% are NH White.<sup>16</sup>

**J. Measures of Socioeconomic Well-being**

41. The NYSED reports that 29% of the District's public school students are English language learners, 21% have disabilities, and 87% are economically disadvantaged.<sup>17</sup> Four of five (82%) of the District's students are eligible for free or reduced-price lunch.<sup>18</sup>

42. According to key socioeconomic measures reported in the ACS, Blacks and Latinos in the District generally outpace their statewide counterparts. (See charts and tables found in **Exhibit E-1** (East Ramapo) and **Exhibit E-2** (New York State)). This favorable comparison to statewide statistics underscores the deep-seated inadequacies in the District's schools, as

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<sup>16</sup> <http://www.p12.nysed.gov/irs/statistics/nonpublic/>.

<sup>17</sup> <https://data.nysed.gov/enrollment.php?year=2016&instid=800000039112>  
For category definitions see: <https://data.nysed.gov/glossary.php?report=enrollment>.

<sup>18</sup> <https://data.nysed.gov/reportcard.php?instid=800000039112&year=2015&createreport=1&freelunch=1>.

described by the state-appointed fiscal monitor in a 2014 report<sup>19</sup>, because one would expect better overall academic performance given the comparatively higher socioeconomic status of minorities living in the District.

43. In contrast, due in part to the unusually large average NH White household size (which serves to depress household finances), NH Whites significantly underperform their statewide counterparts across nearly all measures of socioeconomic well-being.<sup>20</sup>

44. Within the District, NH Whites trail Blacks across key socioeconomic measures – *e.g.*, poverty rates (**Exhibit E-1, pp. 25-29**), median income (**Exhibit E-1, pp. 32-33**), and per capita income (**Exhibit E-1, pp. 40-41**). Latinos, on the other hand, trail both NH Whites and Blacks across most of these same key socioeconomic measures, as well as educational attainment (**Exhibit E-1, pp. 21-22**).<sup>21</sup>

45. Despite the relative socioeconomic well-being of Blacks in the District vis-à-vis NH Whites, the District remains one of the poorest in the state. For example, according to the ACS,

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<sup>19</sup> HENRY M. GREENBERG, REPORT OF INVESTIGATION: EAST RAMAPO: A SCHOOL DISTRICT IN CRISIS (2014), <http://www.p12.nysed.gov/docs/east-ramapo-fiscal-monitor-presentation.pdf>.

<sup>20</sup> In the District, average household size for NH Whites is 3.81 persons, compared to a statewide average of 2.36.

[https://factfinder.census.gov/bkmk/table/1.0/en/DEC/10\\_SF1/H12I/0400000US36|9700000US3627810](https://factfinder.census.gov/bkmk/table/1.0/en/DEC/10_SF1/H12I/0400000US36|9700000US3627810)

In the District, average household size for Blacks is 3.4 and 4.56 for Latinos.

[https://factfinder.census.gov/bkmk/table/1.0/en/DEC/10\\_SF1/H12B/9700000US3627810](https://factfinder.census.gov/bkmk/table/1.0/en/DEC/10_SF1/H12B/9700000US3627810)  
[https://factfinder.census.gov/bkmk/table/1.0/en/DEC/10\\_SF1/H12H/9700000US3627810](https://factfinder.census.gov/bkmk/table/1.0/en/DEC/10_SF1/H12H/9700000US3627810)

<sup>21</sup> Note that the socioeconomic ACS datasets combine single-race Hispanic Blacks with NH Blacks. According to the ACS, 4.6% of Latinos in the District are single-race Black. (**Exhibit E-1, pp. 6-7**).



per capita income in the District is \$21,877 – placing the District in the bottom 12% of all school districts in New York.<sup>22</sup>

#### **K. Community of Interest**

46. Blacks and Latinos in the District share a common bond or “community of interest” on issues relating to immigration and citizenship. According to the ACS, for the VAP, 53.3% of Blacks and 71.2% of Latinos are foreign-born, compared to just 17.0% of NH Whites. Also, within the VAP, 21.1% of African Americans and 57.2% of Latinos are not citizens, compared to just 5.5% of NH Whites. (**Exhibit E-1 at p. 12**).

47. Blacks and Latinos in the District also share a common bond or “community of interest” relating to ability to speak English. According to the ACS, 54.2% of Latinos and 20.4% of African Americans speak English “less than very well” – paralleling the 29% rate of English Language Learners in public schools discussed *supra*. (**Exhibit E-1, pp. 23-24**).

48. In terms of both citizenship status and language barriers, the Census Bureau documentation demonstrates that Blacks and Latinos are a clear community of interest in the District. Public school enrollment itself also represents a community of interest given that 90% of public school students are Black or Latino (as noted in **Figure 12** *supra*).

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<sup>22</sup> Per capita income in East Ramapo:

[https://factfinder.census.gov/bkmk/table/1.0/en/ACS/15\\_5YR/B19301/9700000US3627810](https://factfinder.census.gov/bkmk/table/1.0/en/ACS/15_5YR/B19301/9700000US3627810).

Per capita income in all New York School districts:

[https://factfinder.census.gov/bkmk/table/1.0/en/ACS/15\\_5YR/B19301/0400000US36.97000](https://factfinder.census.gov/bkmk/table/1.0/en/ACS/15_5YR/B19301/0400000US36.97000).

## V. PLAINTIFFS' ILLUSTRATIVE PLANS

49. As noted *supra*, Blacks and Latinos living in majority-minority Rockland County Legislative Districts 8, 13, and 14 (shown in the map in **Figure 9** *supra*), are sufficiently numerous and geographically compact to allow for three BCVAP-majority districts or as many as five B+L CVAP districts under a 9-single-member district plan for the District.

50. As a result, the first *Gingles* precondition – numerosity and geographic compactness of the Black and Latino population – is unquestionably met. The two illustrative plans described below demonstrate possible 9-single member district plan configurations that will satisfy *Gingles* 1. The illustrative plans could function as remedial plans, but are not proposed remedial plans at this time.

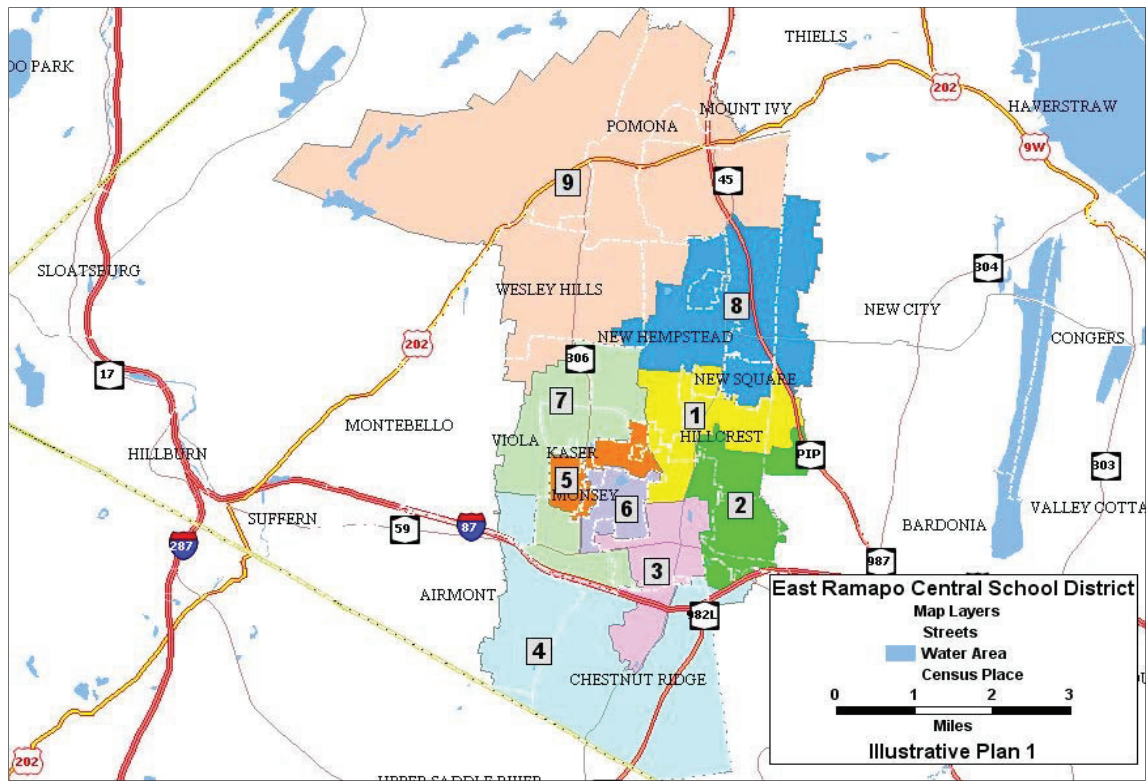
### A. Illustrative Board of Education Plan 1

51. **Figure 13** (on the next page) depicts *Illustrative Plan 1*, in which three of the single-member districts are majority-BCVAP – District 1 (59.16%), District 2 (51.40%), and District 3 (50.91%) – and thus, based on Black CVAP alone, meet the 50% plus 1 threshold standard for a majority-minority district.<sup>23</sup>

52. The three majority-minority districts are anchored in the predominantly minority communities of Spring Hill and Hillcrest, as well as in minority neighborhoods in Nanuet and Chestnut Ridge.

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<sup>23</sup> *Bartlett v. Strickland*, 556 U.S. 1, 13 (2009).

**Figure 13: Illustrative Board of Education Plan 1**

53. *Illustrative Plan 1* demonstrates that *Gingles* 1 can be met even if this Court were to determine that Blacks and Latinos cannot be grouped together as one community of interest and one politically cohesive voting coalition.<sup>24</sup> Yet, should the Court consider Blacks and Latinos as one politically cohesive voting coalition, then the majority-minority CVAP (i.e., B+LCVAP) is much higher in the three districts making up *Illustrative Plan 1*: District 1 (71.65%), District 2 (62.83%), and District 3 (76.63%).

54. The map in **Exhibit F-1** shows street detail of *Illustrative Plan 1*. The link below shows the plan in an address searchable Google map:

[http://fairdata2000.com/Fusion/ERCSD\\_Plaintiffs\\_Illustrative\\_Plan\\_1/index.html](http://fairdata2000.com/Fusion/ERCSD_Plaintiffs_Illustrative_Plan_1/index.html).

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<sup>24</sup> See Expert Report of Dr. Steven P. Cole ¶¶ 3-8, 37, 46, 54, 70, 75-76.

55. The table in **Figure 14** shows summary CVAP statistics for *Illustrative Plan 1*. More detailed population statistics are in **Exhibit F-2**.

**Figure 14: Illustrative Board of Education Plan 1  
2011-2015 ACS CVAP Summary**

District	% NH Black CVAP	% Latino CVAP	% NH White CVAP	% B + L CVAP	BCVAP to NH White CVAP Margin	B+LCVAP to NH White CVAP Margin
1	59.16%	12.49%	17.36%	71.65%	41.80%	54.29%
2	51.40%	11.43%	25.96%	62.83%	25.44%	36.87%
3	50.91%	25.72%	21.36%	76.63%	29.55%	55.27%
4	15.03%	10.99%	68.48%	26.02%	-53.45%	-42.46%
5	1.74%	1.25%	95.92%	2.99%	-94.18%	-92.93%
6	8.24%	2.21%	85.90%	10.45%	-77.66%	-75.45%
7	11.96%	3.96%	82.00%	15.92%	-70.04%	-66.08%
8	8.53%	6.05%	77.68%	14.58%	-69.15%	-63.10%
9	7.98%	9.81%	75.25%	17.79%	-67.27%	-57.46%

56. The map in **Exhibit F-3** zooms to show the majority-minority districts with additional street detail. Place boundaries are depicted with dashed white lines. (**Exhibit J** reports population components by place by district for *Illustrative Plan 1*.)

57. District 1 encompasses nearly two thirds of the population in *Hillcrest* (4,890 persons) – including most areas north of Eckerson Road; north central *Spring Valley* (5,362 persons) south to Maple Avenue; plus smaller populations in *Monsey* (144 persons) – east of Twain Avenue, *New City* (970 persons) – east of Mallory Road, and *New Hempstead* (839 persons) – south of Rensselaer Drive.

58. District 2 encompasses about 93% of the District's portion of *Nanuet* (4,646 persons); about one-third of the population in Hillcrest (2,668 persons) – including most areas south of Eckerson Road; part of eastern *Spring Valley* (4,459 persons); and southwest *New City* (1,209 persons) – east of Mallory Road.

59. District 3 encompasses over one third of the population in *Spring Valley* (11,336 persons) – south of Maple Avenue; and north central *Chestnut Ridge* (626 persons).

60. The map in **Exhibit F-4** overlays public school locations onto *Illustrative Plan 1*.

61. The map in **Exhibit F-5** overlays the residences of incumbents onto *Illustrative Plan 1*. No incumbents are paired.

62. *Illustrative Plan 1* has an overall deviation of 6.39% from the ideal population size.<sup>25</sup> Districts in the plan are reasonably compact and contiguous. District boundaries generally follow existing election district (“ED”) boundaries.<sup>26</sup>

63. As shown with a blue highlight in **Figure 14**, District 1 has a BCVAP margin of 41.8 percentage points over NH White CVAP, District 2 has a 25.44 point margin, and District 3 has a 29.55 point margin. As shown with a yellow highlight in **Figure 14**, District 1 has a B+LCVAP margin of 54.29 percentage points over NH White CVAP, District 2 has a 36.87 point margin, and District 3 has a 55.27 point margin.

64. In my opinion, *Illustrative Plan 1*<sup>27</sup> satisfies the requirements of *Gingles 1*.<sup>28</sup>

## **B. Illustrative Board of Education Plan 2**

65. *Illustrative Plan 2* demonstrates an alternative plan configuration should the Court determine that Blacks and Latinos are to be considered as one politically cohesive coalition.

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<sup>25</sup> The ideal population size for a single-member district under a 9-district plan is 12,559 (113,031 divided by 9).

<sup>26</sup> Election districts are statistical areas established by Rockland County for tabulation of registered voters and turnout. Multiple EDs are assigned to individual polling places. There are 278 EDs in Rockland County – all or parts of 105 EDs are in East Ramapo.

<sup>27</sup> Although *Illustrative Plan 1* may be viewed to concentrate Black voters into three districts, thereby diluting their district-wide voting strength, the plan nevertheless satisfies the numerosity and compactness requirements of *Gingles 1*.

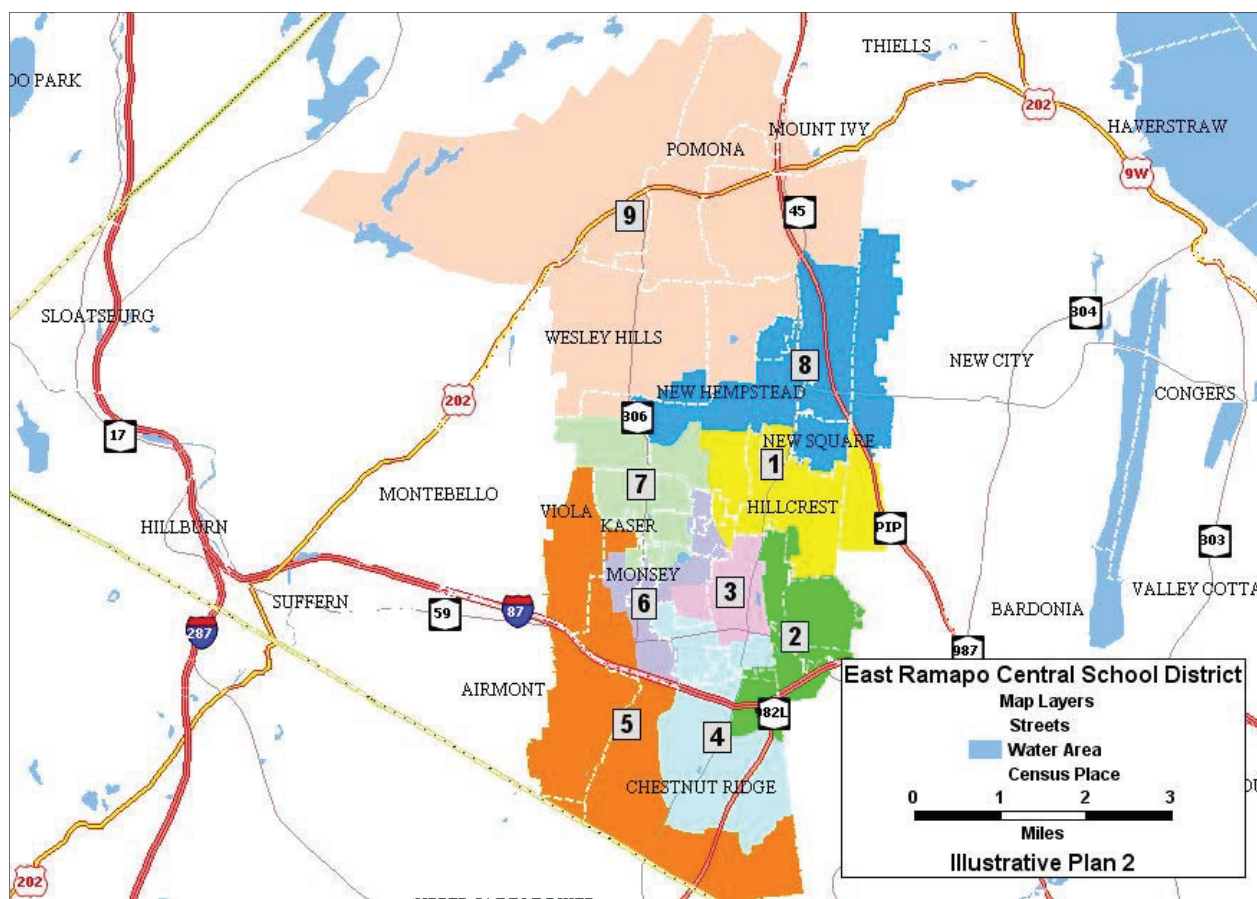
<sup>28</sup> See *Cooper v. Harris*, 137 S. Ct. 1455, 1464 (2017).

*Illustrative Plan 2* contains four majority-minority districts where minorities would have an opportunity to elect a candidate of choice.

66. **Figure 15** depicts *Illustrative Plan 2*, in which four of the single-member districts are majority-B+LCVAP – District 1 (69.33%), District 2 (62.93%), District 3 (57.64%), and District 4 (54.54%).

67. The four majority-minority districts are anchored in the predominantly minority communities of Spring Hill and Hillcrest, as well as in minority neighborhoods in Nanuet and Chestnut Ridge.

**Figure 15: Illustrative Board of Education Plan 2**



68. The map in **Exhibit G-1** shows street detail. The link below shows the plan in an address searchable Google map:

[http://fairdata2000.com/Fusion/ERCSD\\_Plaintiffs\\_Illustrative\\_Plan\\_2/index.html](http://fairdata2000.com/Fusion/ERCSD_Plaintiffs_Illustrative_Plan_2/index.html).

69. The table in **Figure 16** shows summary CVAP statistics for *Illustrative Plan 2*. More detailed population statistics are in **Exhibit G-2**.



**Figure 16: Illustrative Board of Education Plan 2  
2011-2015 ACS CVAP Summary**

District	% NH Black CVAP	% Latino CVAP	% NH White CVAP	% B + LCVAP	BCVAP to NH White CVAP Margin	B+LCVAP to NH White CVAP Margin
1	56.52%	12.81%	18.69%	69.33%	37.83%	50.64%
2	44.76%	18.17%	26.26%	62.93%	18.50%	36.67%
3	47.80%	9.84%	39.43%	57.64%	8.37%	18.21%
4	41.46%	13.08%	39.24%	54.54%	2.22%	15.30%
5	7.10%	9.50%	81.35%	16.60%	-74.25%	-64.75%
6	4.62%	1.33%	92.32%	5.95%	-87.70%	-86.37%
7	0.39%	2.09%	94.89%	2.48%	-94.50%	-92.41%
8	8.15%	5.33%	79.93%	13.48%	-71.78%	-66.45%
9	8.18%	10.11%	74.61%	18.29%	-66.43%	-56.32%

70. As shown in **Figure 16**, Blacks are a substantial plurality of the CVAP in all four majority-minority CVAP districts. As shown with a yellow highlight, after factoring in both BCVAP and LCVAP, the B+LCVAP margin over NH White CVAP is 50.64 percentage points in District 1, with margins of 36.67 in District 2, 18.21 in District 3, and 15.3 in District 4.

71. The map in **Exhibit G-3** zooms to show the majority-minority districts with additional street detail. Place boundaries are depicted with dashed white lines. (**Exhibit J** reports population components by place by district for *Illustrative Plan 2*.)

72. District 1 encompasses about 93% of the population in Hillcrest (7,048 persons); part of north Spring Valley (2,038 persons) – east of Union Road; over half of the District’s portion of New City (1,933 persons) – west of Palisades Interstate Parkway; and New Hempstead (839 persons) – south of Rensselaer Drive.

73. District 2 encompasses the entire District’s portion of Nanuet (5,001 persons); part of Spring Valley (5,902 persons) – east of Seabring Street; and the southwest corner of New City (246 persons).

74. District 3 encompasses nearly one third of the population in central Spring Valley (9,005) persons) – from the northern village limits with Hillcrest then south to near Funston Avenue; and eastern Monsey (3,648 persons) – between Maple Avenue and West Central Avenue.

75. District 4 encompasses about one-fourth of the population in southern Spring Valley (7,890 persons) – primarily south of West Central Avenue; central Chestnut Ridge (3,414 persons); and a small area of Monsey (459 persons).

76. The map in **Exhibit G-4** overlays public school locations onto *Illustrative Plan 2*.

77. The map in **Exhibit G-5** overlays the residences of incumbents onto *Illustrative Plan 2*. No incumbents are paired.

78. The plan has an overall deviation of 3.23% from the ideal population size. Districts in the plan are reasonably compact and contiguous. The plan generally adheres to existing ED boundaries.

79. In my opinion, *Illustrative Plan 2* also satisfies the requirements of *Gingles 1*.

### C. Supplemental Plan Information

80. **Exhibit H** compares Reock compactness scores for the two illustrative plans.<sup>29</sup> The Reock test is a reliable method for measuring the compactness of a district and overall election plan. Federal courts routinely refer to the Reock test as a measure of compactness. Reock compactness scores for the illustrative plan districts are within the norm and compare

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<sup>29</sup> “The Reock test is an area-based measure that compares each district to a circle, which is considered to be the most compact shape possible. For each district, the Reock test computes the ratio of the area of the district to the area of the minimum enclosing circle for the district. The measure is always between 0 and 1, with 1 being the most compact. The Reock test computes one number for each district and the minimum, maximum, mean and standard deviation for the plan.” *Maptitude For Redistricting* software documentation (authored by the Caliper Corporation).

favorably with compactness scores for the Rockland County Legislature.<sup>30</sup> Both illustrative plans score higher than the mean Reock score of .33 calculated for the Rockland County Legislature plan.

81. **Exhibit I** shows schools by district under the two illustrative plans.

82. **Exhibit J** shows population components of incorporated and unincorporated places by district under the two illustrative plans.

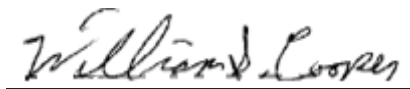
83. **Exhibit K** shows incumbent assignments by district under the two illustrative plans.

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I reserve the right to continue to supplement my report in light of additional facts, testimony and/or materials that may come to light.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury of the laws of the United States that the foregoing is true and correct according to the best of my knowledge, information and belief.

Executed on December 7, 2017

A handwritten signature in cursive script, reading "William S. Cooper", is written over a horizontal line.

WILLIAM S. COOPER

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<sup>30</sup> There is no bright-line rule on what constitutes a “passing grade” in terms of compactness scores. For a detailed discussion of compactness scores, see *Bethune-Hill v. Virginia State Bd. of Elections*, 141 F. Supp. 3d 505, 515, 535-46 (E.D. Va. 2015), *aff’d in part, vacated in part*, 137 S. Ct. 788 (2017) with a district-by-district compactness analysis in the pages that follow.